9-2001

Hard Times, Easy Money?

Robert E. Carpenter

The Levy Economics Institute of Bard College

LEVY INSTITUTE

Policy Note 2001 / 9

HARD TIMES, EASY MONEY? COUNTERCYCLICAL STABILIZATION IN AN UNCERTAIN ECONOMY

ROBERT E. CARPENTER

The tools of countercyclical monetary policy have been brought fully to bear on a potentially severe recession. This note argues, however, that such a policy is less effective in times such as these—that is, when uncertainty is especially high—and so is likely to be particularly ineffective in combating the current economic slowdown.

Looking ahead, the members generally saw a relatively mild and short contraction followed by a gradual recovery next year as a plausible forecast but one that was subject to an unusually wide range of uncertainty, notably in the direction of a potentially much weaker outcome in the nearer term.

—Minutes of the Federal Open Market Committee, October 2, 2001

Heightened uncertainty and concerns about deterioration in business conditions both here and abroad are dampening economic activity.

—Statement by the Federal Reserve Board, November 6, 2001

CURRENT FEDERAL RESERVE POLICY could hardly be more expansionary. By early November 2001, interest rates were at their lowest point in 40 years. The current target rate for federal funds is 2 percent, and the discount rate 1.5 percent. There have been 10 rate cuts in as many

ROBERT E. CARPENTER is a Levy Institute research associate and assistant professor of economics at UMBC.

months, and some predict more are on the way ("Federal Reserve Cuts Rate Half Point," *Wall Street Journal*, November 7, 2001, A2).

The Fed's reaction has been based on clearly deteriorating U.S. economic conditions. Even before September 11, the U.S. economy was slowing markedly. The National Bureau of Economic Research (NBER) business cycle dating committee announced on November 26 that a recession began in March 2001. Growth of consumption expenditures steadily declined beginning in the fourth quarter of 2000, led by nondurable goods and services, and by the third quarter of 2001, durable goods expenditures growth had also declined sharply (see Table 1). Robust gains in consumption expenditures were thought by many to be an important source of the long U.S. expansion, and the slowdown in this component of GDP was a cause for worry.

Table 1 shows that gross private domestic investment also began to exhibit a pronounced cyclical decline in late 2000. Beginning in the third quarter of that year, gross investment growth was negative and stayed that way for the next six consecutive quarters. The decline in investment spending has sharpened since the first quarter of 2001: during the first three quarters of this year, investment growth has declined at double-digit rates. Over the past immediate two quarters, the decline in investment cut across all categories of nonresidential fixed investment; by the third quarter, residential investment appeared to be softening as well.

The large and persistent declines in key components of GDP led the Federal Reserve to shift course on monetary policy on or about January 3, 2001, when the first of the reductions in the federal funds rate occurred; the Fed turned even more sharply expansionary after September 11. In response to what will almost surely be continued economic weakness through the end of 2001, and in response to an unemployment rate that jumped sharply to a five-year high of 5.4 percent in October 2001, the Fed cut rates 50 basis points on each of three occasions since September 17.

Economic contractions always have a level of uncertainty attached to them, as business plans and profitability must be reassessed. It is clear, however, that an extraordinarily high level of uncertainty exists in the current economy, partly due to the barbaric terrorist attacks and the uneasy suspicion that attacks of a wider scale may be planned. Further contributing to the level of uncertainty is a war in the Middle East that has vitally important, but difficult-to-define final objectives that may widen with time. The Federal Reserve Board, during its October 2, 2001, meeting of the Federal Open Market Committee (FOMC), noted that forecasts of future economic conditions are "subject to an unusually wide range of uncertainty, notably in the direction of a potentially much weaker outcome in the nearer term" (Federal Reserve Board 2001b). At the November 6, 2001, meeting, they reemphasized their belief that uncertainty was an important factor in the downturn, noting that "[h]eightened uncertainty and concerns about deterioration in business conditions both here and abroad are dampening economic activity" (Federal Reserve Board 2001a).

TABLE 1 Percent Change from Preceding Period in Real Gross Domestic Product, Selected Components

Year	99	00:1	00:2	00:3	00:4	01:1	01:2	01:3
Gross Domestic Product	**4.1**	**2.3**	**5.7**	**1.3**	**1.9**	**1.3**	**0.3**	**-0.4**
Personal Consumption Expenditures	**5.0**	**5.9**	**3.6**	**4.3**	**3.1**	**3.0**	**2.5**	**1.2**
Durable goods	12.5	19.0	-2.5	8.2	-2.1	10.6	7.0	1.7
Nondurable goods	4.7	5.1	4.7	4.2	0.6	2.4	0.3	0.6
Services	3.7	3.7	4.4	3.5	5.6	1.8	2.8	1.4
Gross Private Domestic Investment	**6.6**	**-0.6**	**19.5**	**-2.8**	**-2.3**	**-12.3**	**-12.1**	**-10.7**
Fixed investment	7.8	13.9	8.8	2.5	0.5	1.9	-9.7	-8.4
Nonresidential	8.2	15.8	12.2	7.1	1.0	-0.2	-14.6	-11.9
structures	-2.0	8.8	11.8	15.2	7.6	12.3	-12.2	-12.1
equipment and software	11.8	18.1	12.4	4.7	-1.1	-4.1	-15.4	-11.8
Residential	6.7	8.5	-0.8	-10.4	-1.1	8.5	5.9	1.9

Source: Bureau of Economic Analysis. Figures are seasonally adjusted annual rates.

Uncertainty, political as well as economic, has led to a sharp decline in confidence about the future of the economy. Indeed, Levy Institute senior scholar James K. Galbraith (2001) states that we now face a potential economic "calamity." The Conference Board's Consumer Confidence Index has declined over four consecutive months to a seven-year low, and the Conference Board's Expectations Index indicates that consumers expect future economic conditions to deteriorate. This uncertainty is also widespread in the business sector: the National Association of Purchasing Managers reported sharp declines in its October gauge of factory activity, and its nonmanufacturing activity index, which tracks the service sector, fell to a record low in October ("Most Expect Fed Rate Cut," *The Boston Herald*, November 6, 2001; "New Signs of a Sharp Downturn; Activity Plummeted in Manufacturing Sector Last Month," *Washington Post*, November 2, 2001, E1). Uncertainty may magnify the normal cyclical processes associated with an economic contraction and propagate them through time.

The tools of countercyclical monetary policy have been brought fully to bear on a potentially severe recession. This Policy Note argues, however, that such policy is less effective when uncertainty is especially high, and so is likely to be particularly ineffective in combating the current economic slowdown. In what follows, I describe how monetary policy works, or how it is "transmitted" to economic activity, and I explain how uncertainty weakens its effects.

Expansionary fiscal policy becomes an especially important stabilization tool when there are demand-side economic shocks that monetary policy can counter only weakly. Both the president and the Congress appear to have recognized the importance of using fiscal policy to stimulate a slowing economy, with President Bush urgently calling for the rapid passage of a stimulus bill. The Senate and House of Representatives are now debating a fiscal stimulus package, but have yet to agree on the mixture of tax cuts and spending increases that the final

bill will contain. Although tax cuts can have an important long-run effect on incentives to work and invest in capital, the current high level of uncertainty will result in spending increases being the more potent stabilization tool in the short run.

How Does Monetary Policy Affect Economic Activity?

What connects, or "transmits," monetary policy to economic activity? Traditional explanations of the effects of monetary policy—repeated time after time in both the popular press and textbooks—have focused on its effect on investment spending by firms. According to this theory, when the Federal Reserve lowers interest rates, it stimulates investment spending by lowering the real cost of capital; interest rates are thus an important component of the cost of capital (taxes being another). Other things being equal, lower interest rates increase the amount of desired capital (e.g., plant and equipment) that firms wish to hold, because rate cuts by the Federal Reserve make it cheaper for businesses to expand the size of their capital stock. Since investment is a component of aggregate demand, the increase in investment causes aggregate economic output to rise.[1]

According to this scenario, the traditional channel of monetary policy can be effective only if there is a strong link between interest rates (and, hence, the user cost of capital) and investment spending. The evidence that this is so, however, is by no means clear. Many studies find quite the opposite—investment spending by firms appears to be only weakly related to interest rates and the cost of capital.[2] Levy Institute senior scholar Steven Fazzari (1999) summarizes the views of many economists, stating that "[d]espite decades of study it has been difficult to establish any empirical link between the cost of capital and investment."

Financial Channels for the Transmission of Monetary Policy

Monetary policy does have an effect on economic activity, despite the apparent weakness of the traditional (interest rate) channel.[3] It may be that our inability to measure the cost of borrowing at the individual firm level means that we cannot detect statistically how interest rates affect investment. It may also mean that there are other channels that complement the traditional channel.

Many researchers have come to believe that the effects of monetary policy are transmitted through financial channels. These channels exist when information asymmetries create important frictions in capital markets. In this context, asymmetric information means that prospective borrowers cannot credibly and fully inform potential lenders of the expected payoffs to their investment. The presence of these frictions means that different sources of finance—bonds, loans, and internal funds—are not good substitutes for one another. Variations in the supply of credit can therefore affect investment spending. The research literature

has emphasized two financial channels for monetary transmission: the bank-lending channel and the balance sheet channel. While these channels are well understood conceptually, their strength in relationship to one another is not as well understood.

The bank-lending channel relies on the idea that banks have a comparative advantage in providing loans to firms that face problems with asymmetric information. Small firms, especially small, young firms, may be "bank-dependent" in the sense that they have poor access to substitutes for bank loans. Expansionary monetary policy works through the bank-lending channel by increasing bank reserves and increasing the supply of bank loans. When the borrowing constraints faced by bank-dependent firms slacken, they borrow and invest more, thereby increasing output.[4]

The balance sheet channel links the quality of a firm's balance sheet, or its "collateralizable net worth," to the amount of external funds it will receive (Bernanke, Gertler, and Gilchrist 1996). The firm's collateralizable net worth is related to the present value of its assets. An additional component of collateral is the present value of the firm's expected future cash flows. Other things being equal, when interest rates fall, the present value of collateral rises. With higher net worth and a sounder balance sheet, lenders grant the firm additional access to debt finance, allowing it to increase investment and aggregate output.

The balance sheet channel is similar to the bank-lending channel, as both emphasize how monetary policy can change the quantity of external finance available to the firm. The specific transmission mechanisms are somewhat different. The balance sheet channel takes a slightly broader perspective about outside sources of funds, and does not emphasize bank loans to the same degree as the bank-lending channel. Implicitly, and importantly for the conduct of monetary policy, is the fact that both channels assume that there is a fringe of unsatisfied borrowers who would invest more in profitable projects if it were not for the frictions in the capital markets that limited their access to outside sources of funds.

Why Might Monetary Policy Be Weak When Uncertainty Is High?

There is no important role for uncertainty in the standard transmission channel of monetary policy. An assumption of the standard model is that a firm can sell all of the output that it desires at the prevailing market price. In the standard channel, firms equate the marginal product of capital (the additional output that can be produced by expanding the firm's capital stock slightly) with the real user cost of capital. Monetary policy works by changing those user costs.

Keynesian theories of investment and basic corporate finance provide a mechanism for uncertainty to potentially influence investment. In these models, firms invest in projects for which the present discounted value of cash flows exceeds the price of investment (investments with positive net present values). Where Keynes parted company with corporate finance is that for many years finance textbooks modeled firms as though they behaved in a

"risk-neutral" fashion. A risk-neutral firm cares only about the expected cash flows (the average) and not about the uncertainty of the cash flows (the variance). It is well known that Keynes believed that uncertainty about the future had a first-order effect on investment spending. Some recent explanations of the factors that influence investment have reemphasized this basic Keynesian insight.[5]

Uncertainty about the payoffs from investment may magnify asymmetric information problems in the capital markets, increasing the frictions and decreasing the availability of credit for investment, irrespective of the fact that monetary policy is expansionary. Although expansionary monetary policy might increase the supply of bank loans, uncertainty might reduce bankers' willingness to *make* loans, rendering monetary policy working through the bank-lending channel ineffective. Likewise, a high level of uncertainty means that the cash flows (and asset values) that form firms' collateralizable net worth become more uncertain, reducing the quality of firms' balance sheets and their access to bank loans and other forms of debt finance.[6] The reduction in lenders' willingness to make loans when there are information asymmetries and the environment is uncertain may weaken both the bank-lending and balance sheet transmission channels. As a result, expansionary monetary policy may be less effective at stimulating aggregate demand.

Reinforcing the decline in the availability of credit, uncertainty about payoffs may decrease investment demand, depressing investment spending at each level of the user cost of capital. Many investments made by firms have a substantial degree of irreversibility. For example, machines or facilities may be highly specific to their intended use, with little value for other uses or to other users. Together, a high degree of uncertainty and irreversibility may make it worthwhile for a firm to postpone investment. This decision is sometimes referred to as exercising a "real option." The price of the option is related to the expected profits forgone by not investing today, and the option's payoff is related to the value of being able to make a potentially more profitable investment in the future, when the uncertainty is lower or has been resolved. The empirical evidence is relatively clear that uncertainty depresses investment.[7] The uncertainty-driven decline in investment also reduces the demand for loans to finance investment, and may more than offset the effect that expansionary monetary policy has on lowering user costs. Both factors—the uncertainty-driven reduction in the demand and supply of loans—suggest that monetary policy may not be effective at stimulating aggregate demand when uncertainty is high.

A Role for Fiscal Policy

Fiscal policy has been deemphasized as a countercyclical policy tool in the United States in part because of past large federal budget deficits. These deficits were considered a problem because they were thought to increase the demand for loanable funds and cause high real interest rates that depressed, or "crowded out," private investment. Opponents of expansionary fiscal policy often mention the potential for negative effects on capital formation as an important reason to limit deficit spending (Office of the President 2001, 24). President Clinton paid careful attention to interest rates and how they might be affected by the size of the federal deficit, and, in the most recent *Economic Report of the President* (2001, 3), cited the decline of both as a major accomplishment of his administration.

Whether the superior economic performance of the United States during the 1990s was caused by the decline in the federal budget deficit or whether the decline in the budget deficit was caused by the superior economic performance of the United States during the 1990s is a question beyond the scope of this note. If "crowding out" can be a problem caused by budget deficits, it is quite unlikely to be an issue affecting the current economy. The federal budget was still $127 billion dollars in surplus at the end of the last fiscal year ("Federal Surplus Declines by Half," *The Atlanta Journal and Constitution*, October 30, 2001, A1), and private investment demand is slack because of poor economic conditions and a high level of economic and political uncertainty.

Both the president and Congress have recognized the importance of a fiscal stimulus bill to combat the recession. A Senate bill that has not yet been voted on contains a combination of tax rebates and subsidies for low-income individuals and additional spending on enhanced unemployment benefits for dislocated workers. Senate majority leader Tom Daschle (D–S. Dak.) also plans to introduce a homeland security bill that would bring the size of the combined fiscal stimulus to roughly $86 billion. The House narrowly passed a $100 billion package that would reduce business taxes and costs, cut personal income tax rates, and increase spending on unemployed workers and tax rebates. Distributional issues surrounding the targets of the tax cuts appear to have the strong potential to delay the passage of a bill for the president's signature, and both houses appear to be voting largely along party lines.

Both bills will contain a mixture of tax cuts and spending increases, but the tax cuts in each bill are unlikely to stimulate aggregate demand as effectively in the short run as a direct injection of government spending. An important way that business tax cuts may increase aggregate demand is by lowering firms' cost of capital.[8] If businesses exercise their option to postpone spending until the economic environment becomes more certain, tax cuts may not provide a powerful short-run stimulus. In a similar way, consumers can also exercise an option to wait before spending the proceeds of tax rebates or the additional net income they receive as the result of a cut in income taxes. Shapiro and Slemrod (2001) found that only 22

percent of households surveyed during August, September, and October planned to spend the proceeds of the recent tax rebate, which suggests that the plan may have only a slight effect on consumption.

In contrast to tax cuts, government expenditures have the advantage of directly injecting spending into the economy to increase aggregate demand. While typically there are lags between when spending increases are enacted and when they have an influence on aggregate demand, once expenditure plans are announced, they may help reduce uncertainty (by increasing expectations of a high future level of aggregate demand) and restore confidence immediately. Because it helps to reduce uncertainty, fiscal spending can indirectly stimulate demand, even before its direct effects are felt.

Spending increases may be easier to enact quickly because they may be less complicated by distributional issues than tax cuts, and it may be easier to find agreement about some types of spending programs. Federal transfers to state governments and municipalities facing budget crises resulting from unexpected high spending for public safety are likely to be widely supported, as are increased expenditures for public health and homeland defense. To address concerns about fiscal discipline in the long run, spending could be used for programs for which the bulk of the outlays are nonrecurring (such as for prepositioned emergency medical and disaster supplies and logistical facilities and security enhancements for public buildings, transportation hubs, public utilities, and energy distribution systems). If the expenses are largely nonrecurrent, such disbursements will not commit the government to a long-run stream of large payments that would contribute to future deficits.

What should be the size of the stimulus package? There is no single right answer, but some back-of-the-envelope calculations may be helpful to provide a context for discussion. Real GDP was $9.342 trillion in the second quarter of 2000 (Bureau of Economic Analysis 2001). Assuming that this was the peak value of GDP for the current business cycle, then a relatively mild recession, similar to 1990–91, might cause a peak-to-trough decline in real GDP of roughly 1.5 percent, or approximately $140 billion in output.[9] A more severe, 2.5 percent contraction (approximately the size of the 1981–82 recession) would cause a peak-to-trough decline of $233 billion. If the recession is of average duration, the peak-to-trough decline would occur over roughly 12 months.

Suppose an $85 billion fiscal stimulus is added to the $60 billion in emergency spending already passed by Congress ("Bush Urges New Tax Cuts," *Baltimore Sun*, October 25, 2001, A1). According to the forecasting firm Macroeconomics Advisors of St. Louis, each dollar of additional spending and tax cuts would generate $1.50 of output over the next 18 months ("Impasse on Stimulus Could Deepen Downturn," *Washington Post*, November 8, 2001, E1). To put the likely timing of the recession and this estimated effect of spending on a consistent basis, assume that the multiplied effect of expenditures is spread equally over the 18-month period.[10] Fiscal spending will then increase aggregate demand on approximately a dollar-for-dollar

basis, and the stimulus package will be enough to offset only the peak-to-trough decline in GDP under the mild recession scenario.[11] Under the severe recession scenario, a $145 billion stimulus package would offset roughly 60 percent of the $233 billion peak-to-trough decline in GDP. Under neither scenario will a $145 billion stimulus package offset the cumulative decline in output. Furthermore, as argued above, tax cuts may have a smaller stimulative effect in an uncertain environment, which would make the effective size of the stimulus package smaller than it appears. Without a larger fiscal stimulus than the ones currently proposed, it seems likely that the economy will have to suffer lost GDP, and the losses are potentially large.

Conclusion

Stabilization policy is important because it can help to eliminate the economic and social costs of a recession. The U.S. economy has been hit by a series of adverse shocks, and it is especially vulnerable to additional spending shocks and downside risk because of the current high level of uncertainty. Monetary policy may be ineffective in the current environment and the fiscal stimulus packages being debated may be too small to fully offset the decline in aggregate demand. Despite criticisms of fiscal fine-tuning, and even at the risk of "overshooting" the target level of GDP, it is especially important to get the economics right and limit the damage to our economy for an additional, strategic reason. The goal of terrorism is to inflict a large amount of damage at very little cost. Enemies of the United States will almost surely not distinguish between the cyclical contraction that was already underway in 2001 and the spending shocks that occurred after September 11. If economic policy is unsuccessful at limiting the depth and duration of the current recession, the recession could provide additional, powerful incentives for others to conduct large-scale attacks on our population and economic infrastructure in the future.

Notes

1. Economists recognize that other types of expenditures, such as consumers' expenditures on housing or durable goods, are similar to investment. Housing and durable goods provide consumers with a flow of services over a long period of time and are conceptually quite similar to an investment by a firm. Consumers also often borrow to finance housing and durable goods purchases, and that borrowing may also be influenced by interest rates. The tendency to emphasize investment in both discussion and analysis, however, occurs because investment is one of the most procyclical components of aggregate demand.
2. For an example of a study that shows a fairly strong relationship between the user cost of capital and investment, see Cummins, Hubbard, and Hassett (1994).

3. For a recent survey, see Friedman (1997).
4. For a discussion of the bank-lending channel, see Kashyap and Stein (1994).
5. For several papers that address the basic issues surrounding the relationship between uncertainty and investment, see the proceedings of a recent conference, "New Perspectives on Fixed Investment: Where Is the Research Agenda Leading?" (City University Business School, London 2001).
6. The explanation linking uncertainty to the supply of credit is similar for both channels. Debt commits a firm to a fixed stream of interest payments. The lender receives the interest payments in the "good" state of nature, and receives the collateral in the "bad" state of nature (when the firm defaults). Greater uncertainty means that a higher probability exists that the firm will not be able to meet its interest obligations and will default. As a result, the expected costs of financial distress faced by the lender rise and the expected return of the loan falls.
7. While I am not aware of analogous research on consumption, much of the expansion was fueled by spending on consumer durable goods, which is conceptually similar to business investment. Admittedly, however, strong automobile sales apparently fueled by 0 percent financing programs are a piece of counterevidence to this hypothesis.
8. Tax cuts may also provide those firms with poor access to external sources of funds with additional finances for expansion. See Carpenter and Petersen (forthcoming) for a discussion.
9. A survey of forecasters conducted by the *Wall Street Journal* (November 14, 2001, A2) indicated a recession of this size or milder to be a likely scenario.
10. If the $1.50 effect estimated by Macroeconomics Advisors is distributed equally over time, the effect over 12 months is $1.50 x (12/18). This assumption may be generous and overstate the potency of fiscal policy, given lags in its effects on aggregate demand.
11. The decline in peak-to-trough GDP understates the full costs of a recession, though, because it does not consider how losses accumulate over time. Each quarter of activity below potential GDP represents lost potential production, or lost trend growth. Summing the difference between potential and actual GDP during the period when GDP is below its potential value (which includes the contraction and a portion of the recovery) captures more of a recession's costs, but is difficult to estimate.

References

Bernanke, Ben, Mark Gertler, and Simon Gilchrist. 1996. "The Financial Accelerator and the Flight to Quality." *The Review of Economics and Statistics* 78:1: 1–15.

Bureau of Economic Analysis. 2001. National Income and Product Accounts. Table 2.1. www.bea.doc.gov/bea/dn/nipaweb/SelectedTables.asp?Selected=Y.

Carpenter, Robert E., and Bruce Petersen. Forthcoming. "Is the Growth of Small Firms Constrained by Internal Finance?" *Review of Economics and Statistics.*

City University Business School, London. 2001. "New Perspectives on Fixed Investment: Where Is the Research Agenda Leading?" Conference Proceedings. The Department of Investment, Risk Management and Insurance; Centre for Mathematical Trading and Finance. www.business.city.ac.uk/irmi/esrc_conference.html.

Cummins, Jason, R. Glenn Hubbard, and Kevin Hassett. 1994. "A Reconsideration of Investment Behavior Using Tax Reforms as Natural Experiments." *Brookings Papers on Economic Activity* 2: 1–59.

Fazzari, Steven M. 1999. *Capital Income Taxes and Economic Performance.* Policy Note 1999/7. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.

Federal Reserve Board. 2001a. "Press Release of the Federal Open Market Committee." November 6. www.federalreserve.gov/boarddocs/press/general/2001/20011106/default.htm.

———. 2001b. "Minutes of the Federal Open Market Committee." October 2. www.federalreserve.gov/fomc/minutes/20011002.htm.

Friedman, Benjamin. 1997. "Does Monetary Policy Affect Real Economic Activity? Why Do We Still Ask This Question?" NBER Working Paper 5212. Cambridge, Mass.: NBER.

Galbraith, James K. 2001. *The War Economy.* Policy Note 2001/8. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.

Kashyap, Anil, and Jeremy Stein. 1994. "Monetary Policy and Bank Lending." In N. Gregory Mankiw, ed., *Monetary Policy.* Chicago: University of Chicago Press.

Office of the President. 2001. *Economic Report of the President.* 107th Congress, 1st Session H.Doc. 107-2. Washington, D.C.: U.S. Government Printing Office.

Papadimitriou, Dimitri B., and L. Randall Wray. 2001. *Fiscal Policy for the Coming Recession: Large Tax Cuts are Needed to Prevent a Hard Landing.* Policy Note 2001/2. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.

Shapiro, Matthew D., and Joel Slemrod. 2001. "Consumer Response to Tax Rebates." University of Michigan. November 20. www.econ.lsa.umich.edu/~shapiro/TaxRebates.pdf.

Recent Levy Publications

POLICY NOTES

The War Economy
James K. Galbraith
2001/8

The New Old Economy
Bill Martin
2001/7

PUBLIC POLICY BRIEFS

The Economic Consequences of German Unification
The Impact of Misguided Macroeconomic Policies
Jörg Bibow
No. 67, 2001 (Highlights, No. 67A)

Racial Wealth Disparities
Is the Gap Closing?
Edward N. Wolff
No. 66, 2001 (Highlights, No. 66A)

ROBERT E. CARPENTER is a Levy Institute research associate and assistant professor of economics at UMBC. He can be contacted at UMBC, Department of Economics, 1000 Hilltop Circle, Baltimore, MD 20250 or bobc@umbc.edu.

He thanks Alessandra Guargilia for her helpful and timely comments and Lele Tang for her excellent and prompt research assistance.

Policy Note 2001 / 9

THE LEVY ECONOMICS INSTITUTE
OF BARD COLLEGE

Blithewood
Annandale-on-Hudson, NY 12504-5000

Address Service Requested

**********AUTO**3-DIGIT 125
162

DR. DIMITRI B. PAPADIMITRIOU
PRESIDENT
THE LEVY ECONOMICS INSTITUTE
PO BOX 5000
ANNANDALE ON HUDSON NY 12504-5000

THE LEVY ECONOMICS INSTITUTE
OF BARD COLLEGE

Blithewood
Annandale-on-Hudson, NY 12504-5000
Phone: 845-758-7700, 202-887-8464 (in Washington, D.C.) **Fax:** 845-758-1149
E-mail: info@levy.org **Website:** www.levy.org